

INTERNATIONAL STANDARD

ISO
6045

First edition
1987-04-15



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Shipbuilding and marine structures — Bearings for derrick goosenecks — Assemblies and components

*Construction navale et structures maritimes — Supports de vit de mulet pour mâts de charge —
Assemblages et éléments constitutifs*

(standards.iteh.ai)

ISO 6045:1987

<https://standards.iteh.ai/catalog/standards/sist/3bb12d56-1a52-49b8-9918-c55378b0f53a/iso-6045-1987>

Reference number
ISO 6045 : 1987 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6045 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

ITeH STANDARD PREVIEW
(standards.iteh.ai)

ISO 6045:1987
http://standards.iteh.ai/catalog/standards/sist/d56-1a52-49b8-9918-c55378b0f53a/iso-6045-1987

Contents	Page
1 Scope and field of application	1
2 References	1
3 Definitions	1
4 Nominal size	1
5 Derrick gooseneck bearing assemblies	1
6 Dimensions	5
7 Materials	15
8 Manufacture	15
9 Designation	15

iTeh STANDARD PREVIEW
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/3bb12d56-1a52-49b8-9918-c55378b0f53a/iso-6045-1987>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

This page intentionally left blank

[ISO 6045:1987](#)

<https://standards.iteh.ai/catalog/standards/sist/3bb12d56-1a52-49b8-9918-c55378b0f53a/iso-6045-1987>

Shipbuilding and marine structures — Bearings for derrick goosenecks — Assemblies and components

1 Scope and field of application

This International Standard defines types of assemblies, and specifies dimensions and materials of components for derrick boom gooseneck bearings of conventional derrick design to be fitted on-board ships for cargo handling purposes.

It does not apply to special types of derricks.

2 References

ISO 286-1, *ISO system of limits and fits — Part 1: Basis of tolerances, deviations and fits.*¹⁾

ISO 630, *Structural steels.*

ISO 683-1, *Heat-treatable steels, alloy steels and free-cutting steels — Part 1: Direct hardening unalloyed and low alloyed wrought steel in form of different black products.*

ISO 8147, *Shipbuilding and marine structures — Derrick rigs and component parts — Vocabulary.*²⁾

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 8147 apply.

4 Nominal size

4.1 The nominal size of a derrick boom gooseneck bearing assembly and of a gooseneck is a numerical value without unit for reference and ordering purposes; it is derived from the maximum thrust in the boom, in kilonewtons.

4.2 The nominal size of a cargo runner lead block holder is a numerical value without unit for reference and ordering purposes; it is derived from the maximum load exerted by the lead block and calculated by the derrick assembly diagram of forces, in kilonewtons.

5 Derrick gooseneck bearing assemblies

5.1 Types

The assemblies are divided into three types as specified in table 1 and illustrated in figures 1, 2 and 3.

Table 1 — Types of assemblies

Code letter	Type Description	Range of thrust in the boom kN
A	with straight gooseneck pin	16 to 160
B	with cranked gooseneck pin	25 to 400
C	with straight gooseneck pin	200 to 1 000

1) At present at the stage of draft. (Revision, in part, of ISO/R 286 : 1962.)

2) At present at the stage of draft proposal.

Components for derrick boom gooseneck bearing assemblies are listed in table 2, where the serial number refers to the corresponding circled number in figures 1, 2 and 3. Assemblies of type A or type B may be fitted either with a cargo runner lead block holder with single eye connection or with a forked connection.

Table 2 — List of components

Serial No.	Number of components for assembly type			Denomination	Code letter	Details
	A	B	C			
1	1	—	—	Gooseneck pin	GA	see 6.1
2	—	1	—	Gooseneck pin	GB	
3	—	—	1	Gooseneck pin	GC	
4	2	2	1	Bearing eye	D	see 6.2
5	—	—	1	Bearing eye	E	
6 ¹⁾	1	—	—	Lead block holder	F	see 6.3
7 ²⁾	—	1	—	Lead block holder	H	
8	1	1	1	Retaining ring	J	see 6.4
9	1	1	1	Retaining pin	K	

- 1) Serial No. 6 for lead block with a fork connection.
- 2) Serial No. 7 for lead block with single eye connection.

5.1.1 Type A

5.1.2 Type B

iTeh STANDARD PREVIEW
(standards.iteh.ai)

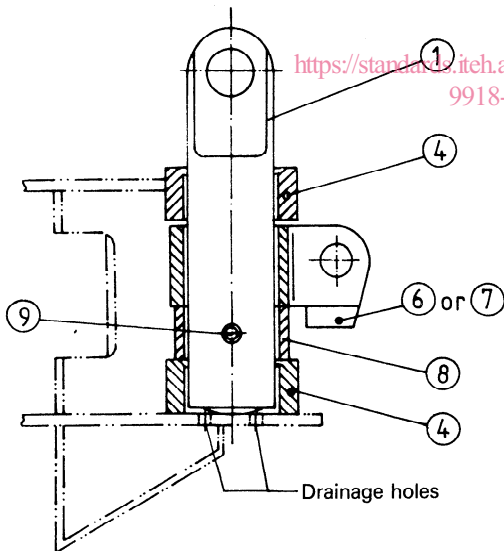


Figure 1 — Illustration of type A assembly

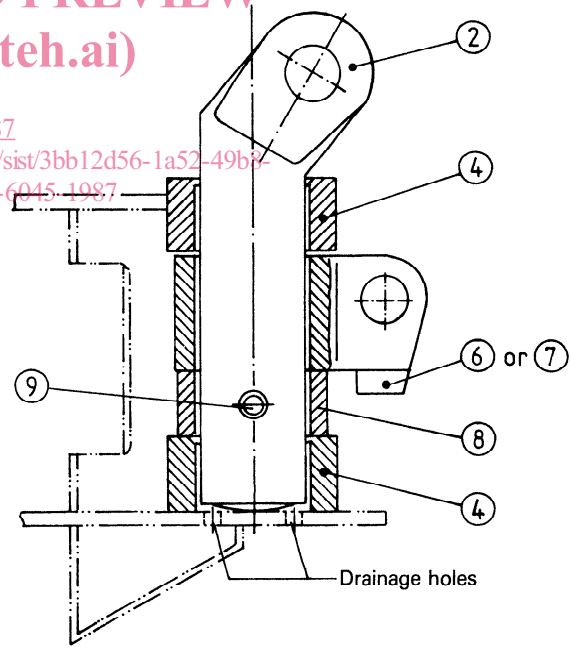


Figure 2 — Illustration of type B assembly

NOTE — Positions of lead block holder (component No. 6 or 7) and retaining ring (component No. 8) may be interchanged.

5.1.3 Type C

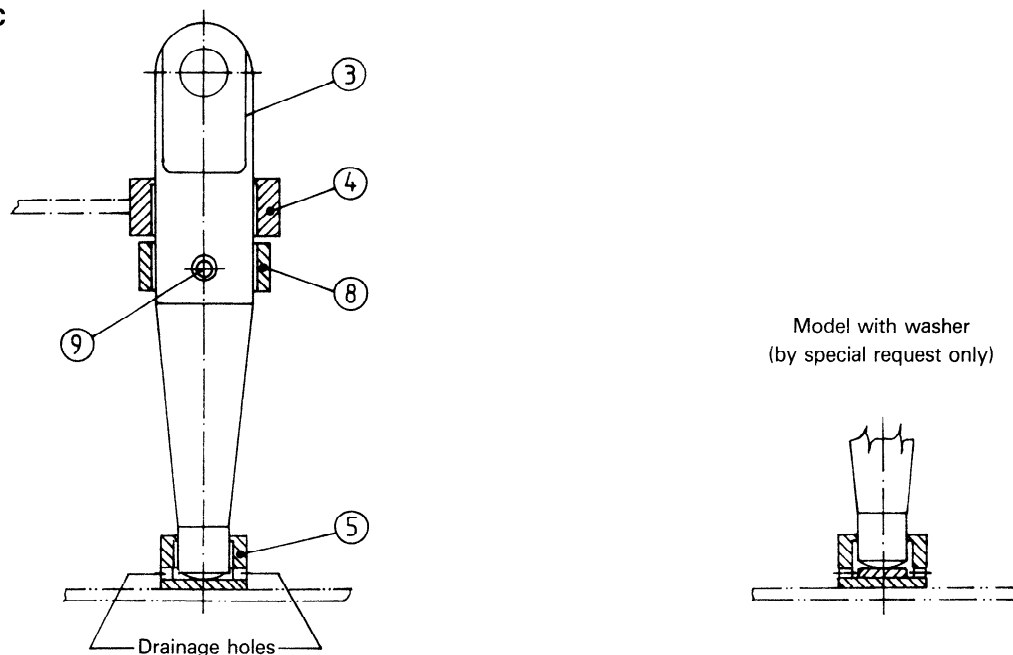


Figure 3 – Illustration of type C assembly

iTeh STANDARD PREVIEW
(standards.iteh.ai)

5.1.4 Nominal sizes and maximum loads

A summary of gooseneck bearing assemblies listed according to types, nominal sizes and maximum loads for block holders is given in table 3.

ISO 6045:1987

Table 3 – Correlation between assembly nominal sizes and maximum loads on the assemblies

Nominal size of assembly type			Thrust in the boom kN max.	Lead block holder for type									
				Load exerted by the lead block kN max.									
A	B	C		A			B						
1,6	—	—	16	20			—						
2	—	—	20	20			—						
2,5	2,5	—	25	20			20						
3	3	—	32	20		40	20						
4	4	—	40	20		40	20		40				
5	5	—	50	20		40	63	20		40			
6	6	—	63	40		63	20		40	63			
8	8	—	80	40		63	100	40		63			
10	10	—	100	40		63	100	40		63	100		
12	12	—	125	40		63	100	160	40		63	100	
16	16	—	160	63		100	160	40		63	100	160	
—	20	20	200	—						63		100	160
—	25	25	250	—						63		100	160
—	32	32	320	—						63		100	160
—	40	40	400	—						63		100	160
—	—	50	500	—						—			
—	—	63	630	—						—			
—	—	80	800	—						—			
—	—	100	1 000	—						—			

5.2 Installation of bearing eyes

For the disposition of bearing eyes, see figures 1 to 3 and table 2. For installation dimensions of the distance between upper and lower bearing eye, see figure 4 and table 4.

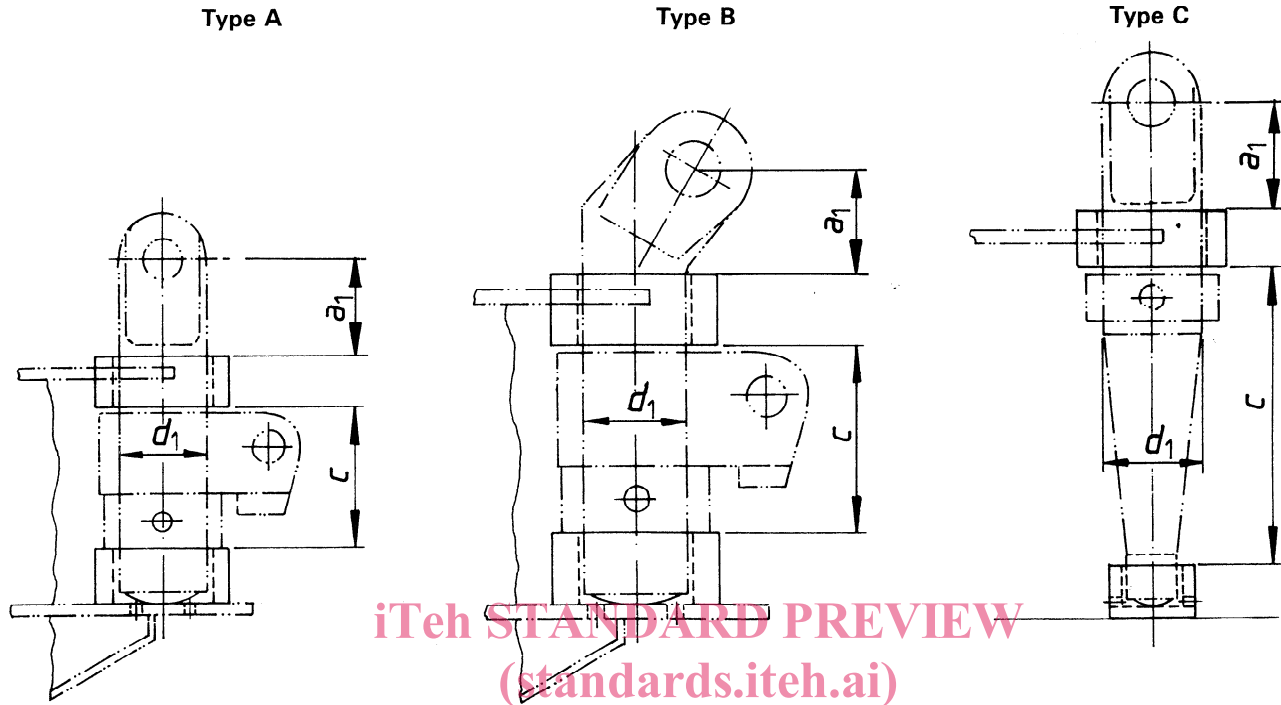


Figure 4 — Positioning of bearing eyes

<https://standards.iteh.ai/catalog/standards/sist/3bb12d56-1a52-49b8-9918-c55378b0f53a/iso-6045-1987>

Table 4 — Bearing eye installation dimensions

Dimensions in millimetres

Nominal size	Gooseneck bearing assembly								
	Type A			Type B			Type C		
	a_1	c	d_1	a_1	c	d_1	a_1	c	d_1
1,6	60	95	50	—	—	—	—	—	—
2	50	95	50	—	—	—	—	—	—
2,5	60	95	60	60	95	55	—	—	—
3	85	120	70	65	95	60	—	—	—
4	70	120	70	70	120	65	—	—	—
5	85	140	80	80	120	70	—	—	—
6	100	140	90	85	140	80	—	—	—
8	105	175	100	90	140	90	—	—	—
10	120	175	110	100	175	100	—	—	—
12	125	215	120	105	175	110	—	—	—
16	150	215	140	110	215	120	—	—	—
20	—	—	—	115	215	130	170	480	155
25	—	—	—	125	215	140	200	540	170
32	—	—	—	140	235	155	210	570	190
40	—	—	—	155	235	170	220	570	190
50	—	—	—	—	—	—	220	600	200
63	—	—	—	—	—	—	245	675	225
80	—	—	—	—	—	—	275	750	250
100	—	—	—	—	—	—	290	825	275

6 Dimensions

For components listed in table 2, main dimensions only are given in tables 5 to 13. For dimensional tolerances, see 6.5.

No dimensions are given for lubrication devices, for the securing pin at both ends of the retaining pin, nor for the washer which may be positioned under the gooseneck pin of assembly type C. These details are left to the manufacturer's option.

6.1 Gooseneck pins

6.1.1 Form GA: Straight gooseneck pin for assembly type A

See figure 5 and table 5.

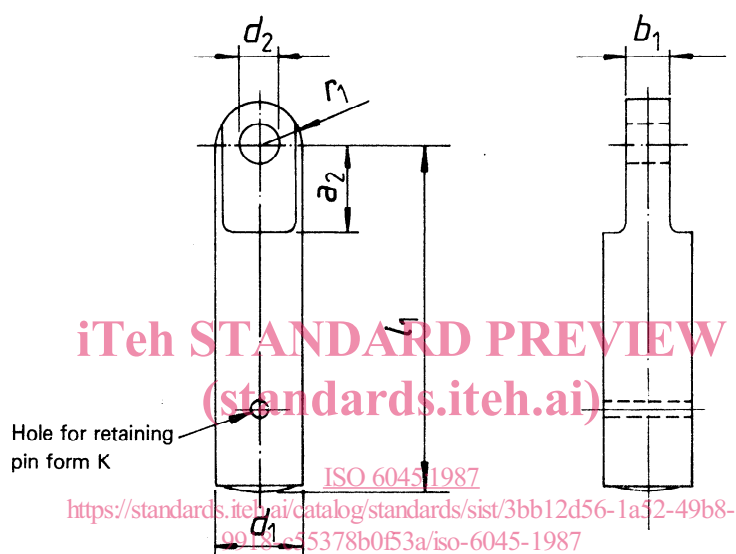


Figure 5 — Shape of gooseneck pin, form GA

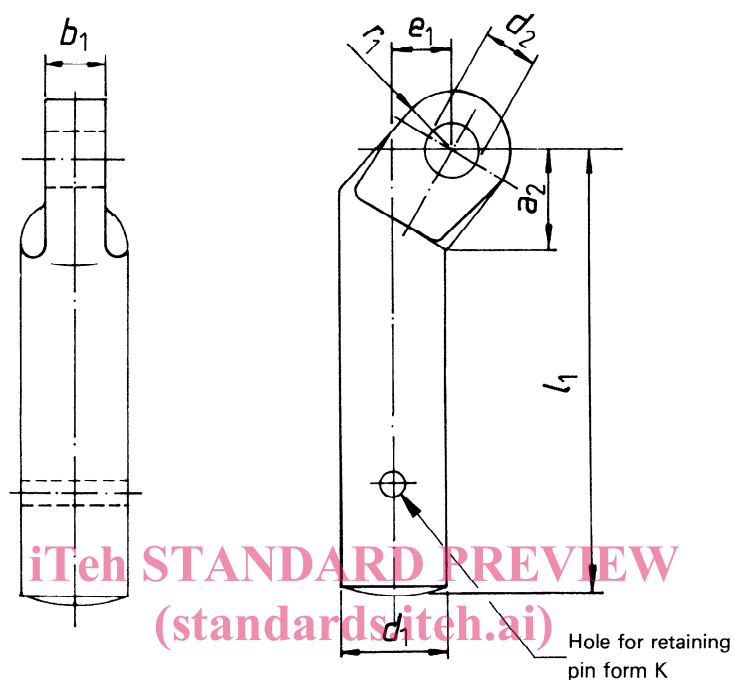
Table 5 — Dimensions of gooseneck pin, form GA

Dimensions in millimetres

Nominal size	a_2	b_1	d_1	d_2	l_1	r_1
1,6	55	26	50	24	245	25
2	45	28	50	26	235	25
2,5	54	30	60	29	255	30
3	79	33	70	32	325	35
4	64	36	70	35	310	35
5	77	40	80	41	345	40
6	92	45	90	44	380	45
8	97	50	100	47	420	50
10	110	57	110	54	455	55
12	115	64	120	58	500	60
16	138	73	140	67	545	70

6.1.2 Form GB: Cranked gooseneck pin for assembly type B

See figure 6 and table 6.



ISO 6045:1987

<https://standards.iteh.ai/catalog/standards/sist/3bb12d56-1a52-49b8-9918-c553766015a/iso-6045-1987>
Figure 6 – Shape of gooseneck pin, form GB

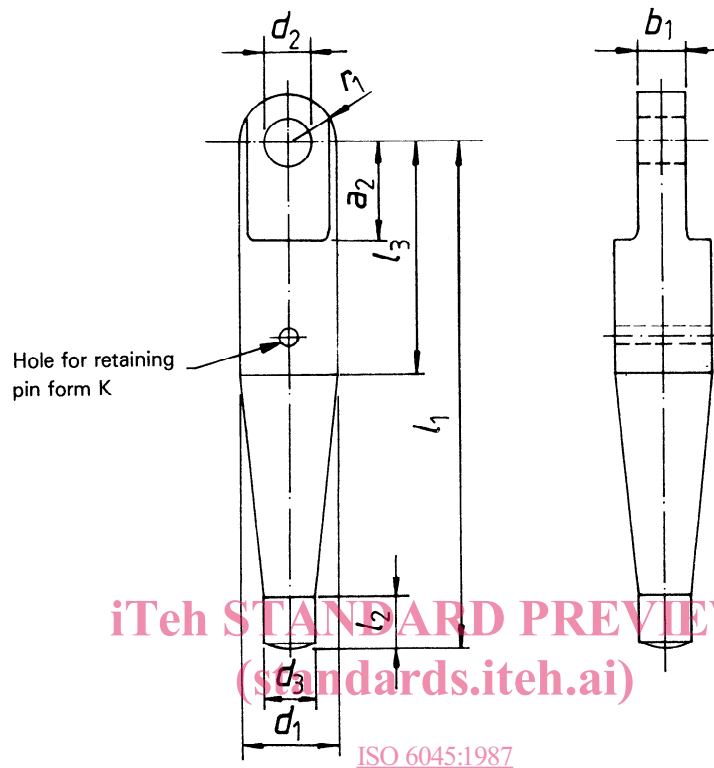
Table 6 – Dimensions of gooseneck pin, form GB

Dimensions in millimetres

Nominal size	a_2	b_1	d_1	d_2	e_1	l_1	r_1
2,5	55	30	55	29	35	245	30
3	60	33	60	32	38	260	32
4	65	36	65	35	40	290	35
5	75	40	70	41	46	320	42
6	80	45	80	44	49	345	45
8	85	50	90	47	52	370	48
10	95	57	100	54	58	415	55
12	100	64	110	58	61	440	60
16	105	73	120	67	64	485	68
20	110	82	130	75	67	510	75
25	115	92	140	79	72	520	80
32	125	102	155	83	78	575	85
40	140	112	170	93	85	590	95

6.1.3 Form GC: Straight gooseneck pin for assembly type C

See figure 7 and table 7.



ISO 6045:1987
<https://standards.iteh.ai/catalog/standards/sist/3bb12d56-1a52-49b8-9918-c55378b0f53a/iso-6045-1987>
 Figure 7 – Shape of gooseneck pin, form GC

Table 7 – Dimensions of gooseneck pin, form GC

Dimensions in millimetres

Nominal size	a_2	b_1	d_1	d_2	d_3	l_1^*	l_2	l_3	r_1
20	158	82	155	75	90	820	80	375	78
25	185	92	170	79	90	910	80	407	85
32	195	102	190	83	100	950	80	417	95
40	205	112	190	93	100	960	80	427	95
50	200	124	200	103	110	1 010	90	442	100
63	225	140	225	113	110	1 120	90	477	113
80	250	150	250	129	120	1 235	95	522	125
100	265	160	275	144	120	1 335	95	547	138

* If a washer is used (see 5.1.3), the length l_1 shall be adjusted accordingly.